

ABSTRACT

An object of the present invention is to provide a gallium nitride compound semiconductor multilayer structure useful for producing a gallium nitride compound semiconductor light-emitting device which operates at low voltage while maintaining satisfactory light emission output.

The inventive gallium nitride compound semiconductor multilayer structure comprises a substrate, and an n-type layer, a light-emitting layer, and a p-type layer formed on the substrate, the light-emitting layer having a multiple quantum well structure in which a well layer and a barrier layer are alternately stacked repeatedly, said light-emitting layer being sandwiched by the n-type layer and the p-type layer, wherein the well layer comprises a thick portion and a thin portion, and the barrier layer contains a dopant.